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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/768,375 | 01/22/2001 | Hemal V. Shah | 10559-419001/P10488 | 2369 |
| 20985 | 7590 | 04/26/2005 | EXAMINER | |
| FISH & RICHARDSON, PC 12390 EL CAMINO REAL SAN DIEGO, CA 92130-2081 | | | CHANKONG, DOHM | |
| | | ART UNIT | | PAPER NUMBER |
| | | 2152 | | |

DATE MAILED: 04/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|-----------------|--------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/768,375 | SHAH ET AL. |
| | Examiner | Art Unit |
| | Dohm Chankong | 2152 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 18 March 2005.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-23 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-23 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>3/18/05, 2/16/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1> This action is in response to Applicant's request for continued examination.

Applicant's remarks have been carefully reviewed. Claims 1-23 are presented for further examination.

Continued Examination Under 37 CFR 1.114

2> A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2.16.2005 has been entered.

Response to Arguments

3> Applicant's arguments with respect to claims 1-23 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4> Claims 8, 9 and 11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5> Claims 8 and 9 are directed towards translating a plurality of calls to a single message. Examiner could not find any support for this limitation in the specification; merely that a TCP/IP packet can be translated into a lightweight message.

6> Claim 9 is directed towards translating a single call to a plurality of lightweight protocol messages. Examiner could not find any support for this limitation in the specification; merely that a single lightweight message can be translated into a plurality of TCP/IP packets.

Claim Rejections - 35 USC § 103

7> The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8> Claims 1, 3-6, 14-16, 18-20 and 22-24 are rejected under 35 U.S.C § 103(a) as being unpatentable over Bach et al, U.S Patent No. 5,619,650 ["Bach"], in view of Haviv, U.S Patent Publication No. 2002/0059451.

9> Bach discloses a method comprising:
examining a call and a file descriptor associated with the call in an application node of a network, the call corresponding to an application program interface for a first transport-layer connection-oriented protocol [column 4 «lines 13-15» | column 5 «lines 1-9» | column 7 «lines 48-52» | column 9 «lines 58-60» where : it is well known in the art that the socket descriptor would be included in any calls in all subsequent communications]; and
if the call and file descriptor are of a first type, translating the call to one or more protocol messages recognized by a second node in the system area network, the one or more protocol messages being defined by a second transport-layer connection-oriented protocol, and communicating the one or more protocol messages to the second node for processing according to the first transport-layer connection-oriented protocol [claim 1 | claim 3].

Bach does not disclose a system area network.

10> In the same field of invention, Haviv discloses implementing his system in a system area network [0019, 0044]. It would have been obvious to one of ordinary skill in the art to have implemented Bach's system as a system area network. One would have been motivated to perform such an implementation to incorporate the updated technology of a system area network. Furthermore, Haviv discloses implementing a sockets direct protocol over the

system area network. As Bach also discloses utilizing a sockets protocol in his network, one would have expected such a combination to be successful.

11> As to claim 3, Bach discloses the method of claim 1 including assigning the file descriptor using an operating system of the application node [column 7 «lines 48-59» | column 12 «lines 20-26»].

12> As to claim 4, Bach discloses the method of claim 1 including mapping a communications identifier, received in the application node from the second node and corresponding to a network connection managed by the second node, to the file descriptor [column 10 «lines 31-55»].

13> As to claim 5, Bach and Haviv substantially discloses the limitations of the network of claim 5 as seen in claim 1, supra, further disclosing:

a first node [see Bach, column 5 «lines 6-II»]; and
an application node including a processor configured for the method of claim 1 [Bach, column 12 «lines 6-26» : “network processor”].

14> As to claim 6, Bach discloses the network of claim 5 further including a network node, wherein the first node is a proxy node including a processor configured for translating the call to a protocol recognized by the network node [column 5 «lines 26-28» | Figure 4 where : Examiner is interpreting Bach's front-end router as having the functionality both the first

node and the application node. Bach discloses that the router translates calls back and forth between the first node (client) and the outlying network topologies (servers of Figure 4)].

15> As to claims 14-15, as they are claims to a network that implement the steps of the method of claims 3-4, they do not teach or further define over the limitations. Therefore, claims 14-15 are rejected for the same reasons set forth for claims 3-4.

16> As to claim 16, Bach and Haviv substantially disclose the apparatus of claim 6 that implement the steps of claim 1 supra, further disclosing the apparatus with:

a port [Bach, column 8 «lines 5-16»];

a processor configured for the method of claim 1 [Bach, claim 1].

17> As to claims 18-19, as they are claims to an apparatus that implement the steps of the method of claims 3-4, they do not teach or further define over the limitations. Therefore, claims 18-19 are rejected for the same reasons set forth for claims 3-4.

18> As to claims 20 and 22-24, as they are claims to an article that causes a system to execute the steps of the method of claims 1-4, respectively, they do not teach or further define over the claimed limitations. Therefore claims 20-24 are rejected for the same reasons set forth for claims 1 and 3-4.

19> Claims 2, 13, 17 and 21 are rejected under 35 U.S.C § 103(a) as being unpatentable over Bach and Haviv, in further view of Sitbon et al, U.S Patent No. 5,568,487 ["Sitbon"].

20> Sitbon was previously cited by Examiner in preceding Office Actions.

21> As to claim 2, Bach does not disclose processing the call using an operating system of the application node if the call and the file descriptor are of a second type.

22> Sitbon discloses processing the call using an operating system of the application node if the call and the file descriptor are of a second type [column 2 «lines 33-44» : where the second type of calls are processed at the TCP library]. It would have been obvious to one of ordinary skill in the art to incorporate Sitbon's conversion functionality into Bach's front-end to enable Bach to process calls without needing to further translate or transmit the call. Such a functionality is well known in the art to save processing time and enable faster response for the client.

23> As to claims 13, 17 and 21, as they do not teach or further define over the claimed limitations of claim 2, they are similarly rejected for the reasons set forth for claim 2.

24> Claims 7, 10 and 12 are rejected under 35 U.S.C § 103(a) as being unpatentable over Bach and Haviv, in view of Speight et al, 4th USENIX Windows Systems Symposium Paper 2000, Pp. 113-124 of the Proceedings, August 3-4, 2000 ["Speight"].

25> Bach and Haviv do not explicitly disclose translating a call to a lightweight protocol message.

26> As to claim 7, Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | "Introduction"]. As is well known in the art, a lightweight protocol increases network performance and efficiency by reducing resource utilization. Therefore, it would have been obvious to one of ordinary skill in the art to incorporate Speight's lightweight alternative to Bach's sockets protocol for the stated advantages.

27> As to claim 10, Bach, Haviv and Speight do disclose translating the call to a lightweight protocol message [see claim 7]. Furthermore Bach discloses using a protocol message received from the first node [column 5 «lines 6-11» | column 9 «lines 11-18»] but not that the protocol message is lightweight.

28> Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | "Introduction"]. It would have been obvious to one of ordinary skill in the art to incorporate lightweight protocol into Bach's call conversion system to increase the number of protocols with which Bach is compatible.

29> As to claim 12, Bach, Haviv and Speight disclose the network wherein the processor is further configured for translating the call to a lightweight protocol message [see claim 7]. Bach further discloses using a plurality of protocol messages received from the first node [column 5 «lines 6-11» | column 9 «lines 11-18»], but not that the protocol message is lightweight.

30> Speight discloses a Windows Socket Direct Lite, a streamlined version of the standard Windows SDP [abstract | “Introduction”]. It would have been obvious to one of ordinary skill in the art to incorporate lightweight protocol into Bach’s call conversion system to increase the number of protocols with which Bach is compatible.

31> Claims 8 are rejected under 35 U.S.C § 103(a) as being unpatentable over Bach, Haviv and Speight, in further view of Kinkade, U.S Patent Publication No. 2001/0034782.

32> As to claim 8, Bach, Haviv and Speight disclose translating a call to a lightweight protocol message, but do not explicitly disclose translating a plurality of calls to a single lightweight protocol message.

33> Kinkade discloses translating a plurality of calls to a single protocol message [0027]. Since Bach discloses processing a number of applications, it would have been obvious to one of ordinary skill in the art to incorporate Kinkade’s translation functionality into Bach’s front end router to enable translating the plurality of calls from the multiple applications into

a single message to be transmitted to the network. Such a batch functionality is well known and ubiquitous in the art for the benefit of efficient utilization of bandwidth because the data of the plurality of calls is transmitted as one message.

34> As to claim 11, Bach, Haviv and Speight disclose the network of claim 5 wherein the processor is further configured for translating one call to a lightweight protocol message [see claim 10], but do not explicitly disclose translating more than one call to a protocol message.

35> Kinkade discloses translating a plurality of calls to a single protocol message [0027]. Since Bach discloses processing a number of applications, it would have been obvious to one of ordinary skill in the art to incorporate Kinkade's translation functionality into Bach's front end router to enable translating the plurality of calls from the multiple applications into a single message to be transmitted to the network. Such a batch functionality is well known and ubiquitous in the art for the benefit of efficient utilization of bandwidth because the data of the plurality of calls is transmitted as one message.

36> Claim 9 is rejected under 35 U.S.C § 103(a) as being unpatentable over Bach, Haviv and Speight, in further view of Auerbach et al, U.S Patent No. 6,549,937 ["Auerbach"].

37> Auerbach was cited by Examiner in previous Office Action.

38> As to claim 9, Bach, Haviv and Speight disclose translating a call to a lightweight protocol message [see claim 7], but do not explicitly disclose translating the call to a plurality of lightweight protocol messages.

39> Auerbach discloses translating the call to a plurality of protocol messages [column 9 «lines 55-59» where: one message is translated to the communication protocols for each service provider and forwarded to each provider]. Since Bach discloses the front end router connected to a plurality of network topologies, it would be advantageous to incorporate the teachings of Auerbach to allow a single call to be translated and transmitted to the plurality of networks.

40> Claims 1-5 and 13-23 are rejected under 35 U.S.C § 103(a) as being unpatentable over Haviv in view of an Sitbon.

41> As to claim 1, Haviv discloses a method comprising:
examining a call and a file descriptor associated with the call in an application node of a system area network, the call corresponding to an application program interface for a first transport-layer connection-oriented protocol [0044, 0049, 0052, 0058 where : Haviv discloses examining the call in the application interface of the server. However, implementing Haviv's application interface functionality into an application node (such as Haviv's disclosed proxy node) is a well known skill in the art]; and

if the call and the file descriptor are of a first type, translating the call to one or more protocol messages recognized by a second node in the system area network, the one or more protocol messages being defined by a second transport-layer connection-oriented protocol, and communicating the one or more protocol messages to the second node for processing according to the first transport-layer connection-oriented protocol [0033, 0049, the table between paragraphs 0060 and 0061 where : Haviv discloses sending additional parameters dealing with file operations].

42> Haviv does not explicitly disclose file descriptors but does disclose including various parameters with his call (command) [0027, 0033, table between 0060 and 0061]. Sitbon discloses file descriptors and utilizing them to determine whether or not to translate the call [column 2 «lines 33-44» | column 4 «line 63» to column 5 «line 3»]. Additionally, file descriptors are well known in the art as identifiers for open files or sockets. So it would have been obvious to one of ordinary skill in the art to have implemented file descriptors into Haviv's additional parameters to better identify the calls involved with the client-server transactions.

43> As to claim 2, Haviv does not explicitly disclose processing the call using an operating system of the application node if the call and the file descriptor are of a second type.

44> Sitbon discloses processing the call using an operating system of the application node if the call and the file descriptor are of a second type [column 2 «lines 33-44» : where the

second type of calls are processed at the TCP library]. It would have been obvious to one of ordinary skill in the art to incorporate Sitbon's conversion functionality into Haviv's call conversion system to enable Haviv to process calls without needing to further translate or transmit the call. Such a functionality is well known in the art to save processing time and enable faster response for the client.

45> As to claim 3, Haviv does not explicitly disclose including assigning the file descriptor using an operating system of the application node.

46> Sitbon discloses assigning the file descriptor using an operating system of the application node [column 3 «lines 36-57» : "wrapper W"]. It would have been obvious to one of ordinary skill in the art to include Sitbon's file descriptors into Haviv's application node to better differentiate between calls when the number of calls is high [Sitbon, column 3 «lines 43-47»].

47> As to claim 4, Haviv does not explicitly disclose including mapping a communications identifier to the file descriptor.

48> Sitbon discloses a method including mapping a communications identifier, received in the application node from the second node and corresponding to a network connection managed by the second node, to the file descriptor [column 9 «line 66» to column 10 «line 12» | column 10 «line 30» where: the protocol address is associated with a "distant entity to be

connected", the distant entity is analogous to the second node, and the protocol address helps define the network connection of said entity]. It would have been obvious to one of ordinary skill in the art to include Sitbon's communications identifier functionality into Haviv's call conversion system to allow users in Haviv's system to constantly be aware of other users in the network [Sitbon - column 10 «lines 56-65»].

49> As to claims 5 and 13-23, as they do not teach or further define over the claimed limitations of claims 1-4 respectively, they are similarly rejected for the reasons set forth for claims 1-4.

Conclusion

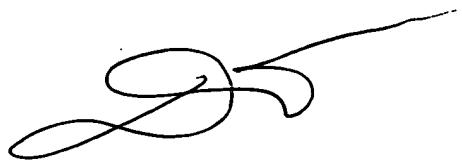
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dohm Chankong whose telephone number is (571)272-3942. The examiner can normally be reached on 8:30AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571)272-3949. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2152

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DC



Dung C. Dinh
Primary Examiner